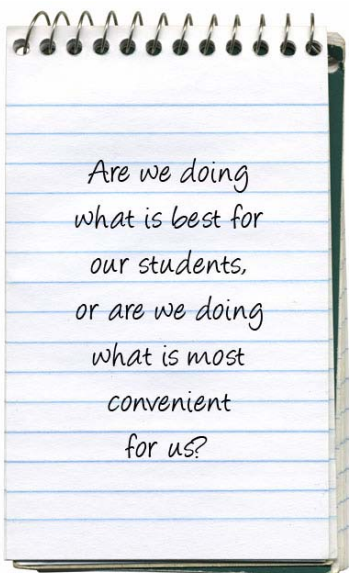


Building Pathways to Success

Sutapa Ray, PhD

What is literacy and learning today? Memorizing facts, or being able to maneuver your way through data to find answers to questions? Our current education system dates back to the Industrial Revolution. At the time, our country needed to prepare its agricultural workers for factory jobs. So we built a school system that catered to the mass production mentality. This education system was efficient and measurable, and it churned out students who were ready to face the demands of our nation's new economy.



Fast forward to 2009, the Industrial Revolution is a distant memory. So why is it that we still educate our students as if preparing them for a life of machine and assembly line work? Teaching by rote and following rigid academic agendas doesn't cut it anymore. Today's children need to learn the skills that will help them in today's job market

and today's society. They need to learn how to make decisions on their own, work well with others, and sift through vast amounts of information while staying focused. And it's time our schools rise to the occasion and fill this need.

In today's age of instant information, it's possible for students to access thousands of different topics in a matter of minutes. Yet in many cases, the techniques teachers use to interact with and impart knowledge to our students are outdated. This paper explains **NEUROPATH LEARNING'S** philosophy on learning and outlines how NPL programs can assist education professionals to change the way an elementary school classroom currently operates.

What are the fundamentals of the NeuroPath Learning Process?

NeuroPath Learning believes in individualized (not standardized), active (not passive) learning that is flexible

enough to accommodate learning differences and preferences. Here are some key features:

NPL delivers Brain-based education:



Learning is a function of the brain. Yet, traditional schooling often inhibits learning by discouraging, ignoring, or punishing the brain's natural learning processes. In order for schools to successfully prepare students for the real

world they need to empower students with advanced skills, such as reasoning, thinking creatively, decision-making and problem solving. These skills can be developed by specific cognitive training activities based on the knowledge of how the brain is wired to learn, remember and process information. The NeuroPath Learning process is based on the understanding of how the brain is attracted to and retains new and useful information. Our experiences can shape our brains, producing a functional re-wiring fairly rapidly. Taking advantage of this inherent neuroplasticity of the brain, NPL programs are able to create and strengthen neural connections. Greater communication between left and right hemispheres of the brain as well as from the frontal lobes to the rest of the brain allow for better focus, self-regulation, good judgment and creativity. Activities in NPL programs are designed to stimulate the prefrontal cortex and develop working memory and executive function. Thus, our goal is to maximize the potential of every child regardless of ability.

NPL fosters Critical Thinking:

In now live in the competitive, fast paced information age, where critical thinking has become a necessity for everyone. Everyone needs to make important choices that arise every day. Everyone needs to be able to engage intelligently in public discourse and debate about important issues. Thinking is also central to elementary education learning. When engaging in seeking answers, students must think about objects and events, ask questions, construct explanations, test those explanations against current knowledge, and communicate their ideas to others. Student's must make their assumptions, use critical and logical thinking and consider alternative explanations. ***The primary goal of NeuroPath Learning programs is to foster creative***



thinking in students. Thinking skills develop at an early age and become a natural part of a child's life. Our products are designed to develop the structure and wiring within a child brain that allows them to approach their life as an act of inquiry and curiosity.

NPL Promotes Active Learning: We believe that



learning is something students must do, not something that is done to or for them. The NPL approach towards elementary learning means shifting emphasis away from teachers presenting information and covering elementary curriculum prescribed by

experts that are supposed to be memorized. The perceived need to include all topics, vocabulary and information in textbooks is in direct conflict with the central goal of having students learn with understanding. To develop a rich knowledge of the world, students must become familiar with modes of inquiry, rules of evidence, ways of formulating questions, and ways of proposing explanations. Individuals often will have differences in literacy in different domains, such as more understanding of natural science and less understanding of physical science. But the emphasis should be on creating interest and inquiry within a student's mind.

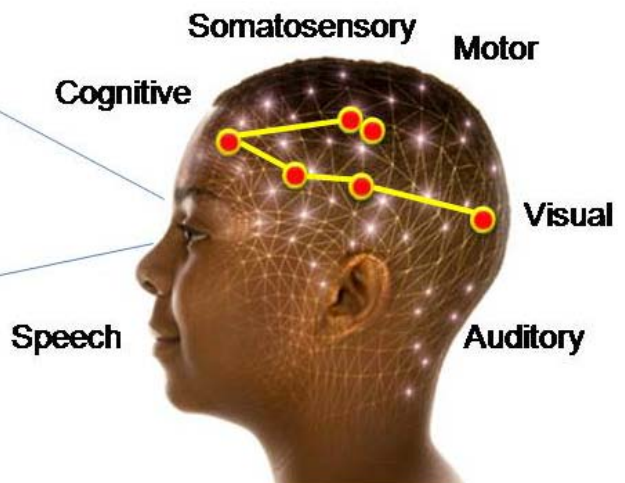
NPL provides Assessment: Real-time assessment is the primary feedback mechanism in our education system. Assessments provide an operational definition of personalized learning goals, in that they define in measurable terms what teachers should teach and students should learn. Data provides students with feedback on how well they are meeting expectations, teachers with feedback on how well their students are learning and school districts with feedback on the effectiveness of established programs. But the greatest value is realized by the student.

Students need the opportunity to evaluate and reflect on their own understanding and ability. The ability to self-assess understanding is an essential tool for self-directed learning. Through self-reflection, students clarify ideas of what they are supposed to learn. They begin to internalize the expectation that they can learn elementary education. Developing self-assessment skills is an ongoing process throughout a student's school career, becoming increasingly more sophisticated and self-initiated as a student progresses. With NPL assessment, students constantly get feedback and learn from their own assessment in real-time and not months later. Neurologically speaking, the brain learns through making predictions and evaluating outcome – whenever a correct prediction is made a chemical reaction occurs in the brain that strengthens knowledge pathways. Thus immediate feedback is crucial for learning.

Teachers are in the best position to put assessment data to powerful use by making adjustments to their teaching on the basis of their interpretation of that information. Assessments serve at least three purposes: (i) to determine the student's initial understanding and abilities, (ii) to monitor student progress and (iii) to collect information to grade student achievement.

NPL offers a Multimodal Learning Environment

Computers provide the unique capability of an interactive, multimodal learning environment. Students learn through seeing, hearing and reading simultaneously. Involving multiple senses in this way, results in better retention and recall. Moreover, when neurons in distant regions of the brain "fire together" or get activated simultaneously, they are said to "wire together"- building long range connections. These long range neurological pathways are vital for complex functions such as language, self-regulation and decision making. The interactive nature of the program combined with its ability to offer one-on-one, direct, guided instruction, add further to its effectiveness as a teaching tool, especially for special education.



NPL programs can be customized: The spiraling structure of the NPL programs allows a child to master the content at their own pace and this is one way in which our programs are individualized to the child. Another way that we are able to address individual concerns is by custom building programs for individual needs. For example, if a child has gone through our programs and has still not been able to master a concept or skill we can provide additional activities to address this further.



NPL program content:

The content we provide in our learning programs outlines what students should know, understand, and be able to do over the course of pre-k to 2nd grade education. This includes:

- **Cognitive learning**, the primary goal of all learning activities
- **Academic learning**, covering the basic concepts in Literacy and Math that are aligned with state standards
- **Real world application** of academic knowledge, teaching the value of education.
- **Life experience learning**, including the preparation for situations that the child will face beyond academic challenges.
- **Executive function training** to develop self-regulation skills.
- **Communication skill building:** Multimodal language activities that develop hearing, speaking and listening skills.
- **Non-verbal intellect**, development and assessment.
- **Cultural learning** that teaches what to think and how to think
- **Life skills** such as the importance of self-responsibility, social responsibility etc

The context of the subject matter is the development of real world skills and understanding. Our context is always based on reality with real world photograph's, video and voice. We do not present fantasy as it sets the student up for a mind set of life's expectation that are unrealistic and do not require the initiative on the part of the child for true success in life.

NPL program standards:

- The consistency of our programs exceed state standards across all grade levels
- Content is developmentally appropriate, interesting, and relevant to student's lives, organized around inquiry and connected with other school subjects as well as the real world
- Activities allow students to excel at whatever pace they are able to achieve mastery

NPL program goals:

The NPL elementary education program goals for the student include the following:

- Creating focus and thinking
- Establishing self belief about being smart and able
- Establishing purpose and motivation for learning
- Creativity and problem solving
- Self-regulation development
- Understanding own aptitude
- Knowledge of subject matter

Visit www.neuropathlearning.com to find out more about our programs:

